**Isotope Practice Worksheet** Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Define an isotope.
2. What would happen if the number of protons were to change in an atom?
3. Here are three isotopes of an element: 612C 613C 614C
   1. The element is: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   2. The number 6 refers to the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   3. The numbers 12, 13, and 14 refer to the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   4. How many protons \_\_\_\_\_\_\_ and neutrons are in the first isotope? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   5. How many protons \_\_\_\_\_\_\_ and neutrons are in the second isotope? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   6. How many protons \_\_\_\_\_\_\_ and neutrons are in the third isotope? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Complete the following chart:**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Isotope name** | **atomic #** | **mass #** | **# of protons** | **# of neutrons** | **# of electrons** |
| uranium-235 |  |  |  |  |  |
| uranium-238 |  |  |  |  |  |
| boron-10 |  |  |  |  |  |
| boron-11 |  |  |  |  |  |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Symbol | Name | Atomic Number | Number of Protons | Number of Neutrons | Mass Number | Number of Electrons | Charge of Atom |
| 13C |  |  |  |  |  |  |  |
| 11C |  |  |  |  |  |  |  |
| 41K |  |  |  |  |  |  |  |
| 23Mg |  |  |  |  |  |  |  |
| 235U |  |  |  |  |  |  |  |
| 126I |  |  |  |  |  |  |  |

1. What is the charge of every isotope we have looked at so far?
2. What would cause an atom to have a charge of other than neutral?